

L Number	Hits	Search Text	DB	Time stamp
25	51	header same fingerprint\$4	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
26	5478	(match\$4 or compar\$4 or equal\$4) same fingerprint\$4	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
27	12	digital adj1 signature and (((match\$4 or compar\$4 or equal\$4) same fingerprint\$4) and ((audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header))	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
28	4	((watermark\$ or hash\$4)near4 header) same (MPEG or audio or multimedia or music or song)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
29	25149	fingerprint\$4 or watermark\$4	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
30	53	decrypt\$4 near3 fingerprint\$4	USPAT; EPO; JPO; DERWENT	2003/12/12 11:19
31	332576	MPEG or audio or multimedia or music or song	USPAT; EPO; JPO; DERWENT	2003/12/12 11:19
32	7	(inverse adj2 modifi\$5) and (fingerprint\$4 or watermark\$4)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:19
33	76	((check\$4 or match\$4 or compar\$4)near3(hash or signature) same (audio or multimedia or mp3 or music or song or data)) same header	USPAT; EPO; JPO; DERWENT	2003/12/12 11:19
34	8	(hash\$3 near3(audio or song or video or mp3 or mpeg or music or multimedii)) and header	USPAT; EPO; JPO; DERWENT	2003/12/12 11:23
35	56	(song or music or multimedia or video or content or mp3) and (MD5 same header)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:23
36	207	header near4 (hash\$4)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:24
-	46	header same fingerprint\$4	USPAT	2003/12/12 11:17
-	121641	audio or music or MPEG or multimedia	USPAT	2003/12/10 11:22
-	11178	biometric or fingerprint\$4	USPAT	2003/12/10 11:23
-	62087	header	USPAT	2003/12/10 11:23
-	15	(audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header	USPAT	2003/12/10 12:24
-	0	(audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header same digital adj1 signature	USPAT	2003/12/10 11:29
-	0	(audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header same digital and signature	USPAT	2003/12/10 11:29
-	2	recalculat\$4 near5 fingerprint\$4	USPAT	2003/12/10 11:32
-	5	recomp\$5 near5 fingerprint\$4	USPAT	2003/12/10 11:32
-	3276	(match\$4 or compar\$4 or equal\$4) same fingerprint\$4	USPAT	2003/12/12 11:18
-	14	((match\$4 or compar\$4 or equal\$4) same fingerprint\$4) and ((audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header)	USPAT	2003/12/10 14:00

-	12	digital adj1 signature and (((match\$4 or compar\$4 or equal\$4) same fingerprint\$4) and ((audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header))	USPAT	2003/12/12 11:18
-	42	decrypt\$4 near3 fingerprint\$4	USPAT	2003/12/12 11:18
-	12	(digital adj1 signature and (((match\$4 or compar\$4 or equal\$4) same fingerprint\$4) and ((audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header))) and (decrypt\$4 near3 fingerprint\$4)	USPAT	2003/12/10 14:45
-	1	("5838790").PN.	USPAT	2003/12/10 12:56
-	121	(biometric or fingerprint\$4)near4 accuracy	USPAT	2003/12/10 14:23
-	201	(watermark\$ or hash\$4)near4 header	USPAT	2003/12/11 07:36
-	133712	MPEG or audio or multimedia or music or song	USPAT	2003/12/12 11:19
-	4	((watermark\$ or hash\$4)near4 header) same (MPEG or audio or multimedia or music or song)	USPAT	2003/12/12 11:18
-	1074	fingerprint near2 (data or file or program or signal or song or multimedia)	USPAT	2003/12/11 08:11
-	1125	fingerprint\$3 near2 (data or file or program or signal or song or multimedia)	USPAT	2003/12/11 07:46
-	7	header same (fingerprint\$3 near2 (data or file or program or signal or song or multimedia))	USPAT	2003/12/11 07:40
-	383	fingerprint\$3 near2 (signal or song or multimedia or MP3 or mpeg)	USPAT	2003/12/11 07:55
-	0	header same (fingerprint\$3 near2 (signal or song or multimedia or MP3 or mpeg))	USPAT	2003/12/11 07:47
-	61	header and (fingerprint\$3 near2 (signal or song or multimedia or MP3 or mpeg))	USPAT	2003/12/11 07:54
-	126	hash\$3 near2 (signal or song or multimedia or MP3 or mpeg)	USPAT	2003/12/11 07:56
-	13	header same (hash\$3 near2 (signal or song or multimedia or MP3 or mpeg))	USPAT	2003/12/11 10:59
-	975	hash\$3 near2 (data)	USPAT	2003/12/11 07:56
-	52	(hash\$3 near2 (data)) same header	USPAT	2003/12/11 07:59
-	417	fingerprint adj1 data	USPAT	2003/12/11 08:01
-	1	(fingerprint adj1 data) same header	USPAT	2003/12/11 08:01
-	5	(fingerprint near2 (data or file or program or signal or song or multimedia)) same header	USPAT	2003/12/11 08:19
-	126	fingerprint\$3 near3 data near5 match\$4	USPAT	2003/12/11 08:20
-	6	(fingerprint\$3 near3 data near5 match\$4) and header	USPAT	2003/12/11 08:22
-	1275	(fingerprint4 or hash) near3(data or song or mp3 or mpeg or music or file)	USPAT	2003/12/11 08:23
-	75	header same ((fingerprint4 or hash) near3(data or song or mp3 or mpeg or music or file))	USPAT	2003/12/11 08:25
-	8644	(data near2 ID)or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID)	USPAT	2003/12/11 08:47
-	122	(signature or hash) same ((data near2 ID)or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID))	USPAT	2003/12/11 08:27
-	6	((signature or hash) same ((data near2 ID)or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID))) same header	USPAT	2003/12/11 08:29

-	751	header same (signature or hash or fingerprint) same (audio or music or data or mp3 or mpeg or multimedia or file)	USPAT	2003/12/11 08:46
-	85	header same (signature or hash or fingerprint) same (audio or music or mp3 or mpeg or multimedia)	USPAT	2003/12/11 08:40
-	179	(match\$4 or compar\$4 or check\$4) near4 (fingerprint adj2 data)	USPAT	2003/12/11 08:42
-	4	((match\$4 or compar\$4 or check\$4) near4 (fingerprint adj2 data)) and header	USPAT	2003/12/11 08:41
-	10	(match\$4 or compar\$4 or check\$4) near4 (fingerprint adj2 data) and digital adj1 signature	USPAT	2003/12/11 08:43
-	2853	file near2 header	USPAT	2003/12/11 08:45
-	9	(song near2 hash) or (music near2 hash) or (mp3 near2 hash) or (audio near2 hash) or (mpeg near2 hash)	USPAT	2003/12/11 08:48
-	8652	((data near2 ID) or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID)) or ((song near2 hash) or (music near2 hash) or (mp3 near2 hash) or (audio near2 hash) or (mpeg near2 hash))	USPAT	2003/12/11 08:48
-	744	header same (((data near2 ID) or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID)) or ((song near2 hash) or (music near2 hash) or (mp3 near2 hash) or (audio near2 hash) or (mpeg near2 hash)))	USPAT	2003/12/11 08:49
-	5015	check\$4 or match\$4 or compar\$4)near3(hash or signature	USPAT	2003/12/11 09:00
-	403197	audio or music or multimedia or song or program	USPAT	2003/12/11 08:50
-	705	(check\$4 or match\$4 or compar\$4)near3(hash or signature) same (audio or music or multimedia or song or program)	USPAT	2003/12/11 08:51
-	17	(check\$4 or match\$4 or compar\$4)near3(hash or signature) same (audio or music or multimedia or song or program) same header	USPAT	2003/12/11 08:58
-	533	software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id	USPAT	2003/12/11 09:00
-	5015	check\$4 or match\$4 or compar\$4)near3(hash or signature	USPAT	2003/12/11 09:14
-	1	(header same (software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id)) and (check\$4 or match\$4 or compar\$4)near3(hash or signature)	USPAT	2003/12/11 09:01
-	1	((header same (software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id)) and (check\$4 or match\$4 or compar\$4)near3(hash or signature)) and (check\$4 or match\$4 or compar\$4)near3(hash or signature)	USPAT	2003/12/11 09:01
-	71	header same (software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id)	USPAT	2003/12/11 09:12
-	5015	check\$4 or match\$4 or compar\$4)near3(hash or signature	USPAT	2003/12/11 09:14
-	859440	audio or multimedia or mp3 or music or song or data	USPAT	2003/12/11 09:15
-	2083	(check\$4 or match\$4 or compar\$4)near3(hash or signature) same (audio or multimedia or mp3 or music or song or data)	USPAT	2003/12/11 09:16

-	75	((check\$4 or match\$4 or compar\$4)near3(hash or signature) same (audio or multimedia or mp3 or music or song or data)) same header	USPAT	2003/12/12 11:19
-	557	fingerprint adj1 data or hash adj1 data	USPAT	2003/12/11 09:26
-	12	(fingerprint adj1 data or hash adj1 data) same header	USPAT	2003/12/11 09:27
-	756	fingerprint near2 data	USPAT	2003/12/11 09:27
-	2	header same (fingerprint near2 data)	USPAT	2003/12/11 09:30
-	30	hash\$3 near3(audio or song or video or mp3 or mpeg or music or multimedii)	USPAT	2003/12/11 09:31
-	1	(hash\$3 near3(audio or song or video or mp3 or mpeg or music or multimedii)) same header	USPAT	2003/12/11 09:31
-	8	(hash\$3 near3(audio or song or video or mp3 or mpeg or music or multimedii)) and header	USPAT	2003/12/12 11:22
-	189	header near4 (hash\$4)	USPAT	2003/12/12 11:24
-	647	header near4 (checksum)	USPAT	2003/12/11 09:35
-	794	header near4(hash or checksum or fingerprint\$4)	USPAT	2003/12/11 09:36
-	1293047	song or music or multimedia or video or content or mp3 or data	USPAT	2003/12/11 09:56
-	793	(header near4(hash or checksum or fingerprint\$4)) and (song or music or multimedia or video or content or mp3 or data)	USPAT	2003/12/11 09:37
-	571	(header near4(hash or checksum or fingerprint\$4)) same (song or music or multimedia or video or content or mp3 or data)	USPAT	2003/12/11 09:37
-	2635	digital adj1 signature	USPAT	2003/12/11 09:37
-	23	((header near4(hash or checksum or fingerprint\$4)) same (song or music or multimedia or video or content or mp3 or data)) and (digital adj1 signature)	USPAT	2003/12/11 09:41
-	4	((watermark\$ or hash\$4)near4 header) same (MPEG or audio or multimedia or music or song)	USPAT	2003/12/11 09:43
-	7	fingerprint near4 header	USPAT	2003/12/11 09:54
-	60	MD5 same header	USPAT	2003/12/11 09:55
-	60	(song or music or multimedia or video or content or mp3 or data) and (MD5 same header)	USPAT	2003/12/11 09:55
-	868796	song or music or multimedia or video or content or mp3	USPAT	2003/12/11 09:56
-	56	(song or music or multimedia or video or content or mp3) and (MD5 same header)	USPAT	2003/12/12 11:23
-	1127	file adj1 header	USPAT	2003/12/11 09:57
-	65	header same(watermark\$4)	USPAT	2003/12/11 10:02
-	483934	audio or music or song or multimedia or video or program or mp3 or mpeg	USPAT	2003/12/11 10:02
-	63	(header same(watermark\$4)) and (audio or music or song or multimedia or video or program or mp3 or mpeg)	USPAT	2003/12/11 10:20
-	0	(embed\$4 or insert\$4)near4 fingerprint\$4 near5 header	USPAT	2003/12/11 10:59
-	13	(embed\$4 or insert\$4)near4 fingerprint\$4 same header	USPAT	2003/12/11 11:02
-	20	(embed\$4 or insert\$4)near4 watermark\$4 same header	USPAT	2003/12/11 13:33

-	0	inverse adj2 modifi\$5 same fingerprint\$4	USPAT	2003/12/11 13:34
-	3	inverse adj2 modifi\$5 same watermark\$4	USPAT	2003/12/11 13:35
-	11682	fingerprint\$4 or watermark\$4	USPAT	2003/12/12 11:18
-	7	(inverse adj2 modifi\$5) and (fingerprint\$4 or watermark\$4)	USPAT	2003/12/12 11:19
-	0	inverse adj2 modifi\$5 near5 allow\$4	USPAT	2003/12/11 13:54
-	157	inverse adj2 modifi\$5	USPAT	2003/12/12 06:00
-	157	inverse adj2 modifi\$5	USPAT	2003/12/11 14:57
-	63701	inverse adj2 modifi\$5 adn header	USPAT	2003/12/11 14:57
-	24	inverse adj2 modifi\$5 and header	USPAT	2003/12/12 09:00
-	0	inverse adj2 modification same fingerprint\$4	USPAT	2003/12/11 15:09
-	0	inverse adj2 modifi\$5 same fingerprint\$4	USPAT	2003/12/11 15:09
-	3	inverse adj2 modifi\$5 same watermark\$5	USPAT	2003/12/11 15:16
-	28	inverse adj2 transform\$5 near6 advantage\$3	USPAT	2003/12/11 15:21
-	0	IDCI and watermark\$4	USPAT	2003/12/12 05:58
-	39	IDCI	USPAT	2003/12/12 05:59
-	0	inverse adj2 modifi\$5 near4 allow\$4	USPAT	2003/12/12 06:01
-	157	inverse adj2 modifi\$5	USPAT	2003/12/12 07:46
-	68	watermark near2 allow\$4	USPAT	2003/12/12 07:58
-	1	("5892891").PN.	USPAT	2003/12/12 09:01
-	1	("5982891").PN.	USPAT	2003/12/12 09:01

L Number	Hits	Search Text	DB	Time stamp
25	51	header same fingerprint\$4	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
26	5478	(match\$4 or compar\$4 or equal\$4) same fingerprint\$4	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
27	12	digital adj1 signature and (((match\$4 or compar\$4 or equal\$4) same fingerprint\$4) and ((audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header))	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
28	4	((watermark\$ or hash\$4)near4 header) same (MPEG or audio or multimedia or music or song)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:18
29	25149	fingerprint\$4 or watermark\$4	USPAT; EPO; JPO; DERWENT	2003/12/12 11:30
30	53	decrypt\$4 near3 fingerprint\$4	USPAT; EPO; JPO; DERWENT	2003/12/12 11:19
31	332576	MPEG or audio or multimedia or music or song	USPAT; EPO; JPO; DERWENT	2003/12/12 11:30
32	7	(inverse adj2 modifi\$5) and (fingerprint\$4 or watermark\$4)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:19
33	76	((check\$4 or match\$4 or compar\$4)near3(hash or signature) same (audio or multimedia or mp3 or music or song or data)) same header	USPAT; EPO; JPO; DERWENT	2003/12/12 11:19
34	8	(hash\$3 near3(audio or song or video or mp3 or mpeg or music or multimedii)) and header	USPAT; EPO; JPO; DERWENT	2003/12/12 11:23
35	56	(song or music or multimedia or video or content or mp3) and (MD5 same header)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:23
36	207	header near4 (hash\$4)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:24
37	523	380/200-205.ccls.	USPAT; EPO; JPO; DERWENT	2003/12/12 11:25
38	88	380/200.ccls.	USPAT; EPO; JPO; DERWENT	2003/12/12 11:25
39	955	380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.	USPAT; EPO; JPO; DERWENT	2003/12/12 11:26
40	3097	713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.	USPAT; EPO; JPO; DERWENT	2003/12/12 11:27
41	2544	705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.	USPAT; EPO; JPO; DERWENT	2003/12/12 11:28
42	6471	380/200-205.ccls. or (380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.) or (713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.) or (705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.)	USPAT; EPO; JPO; DERWENT	2003/12/12 11:28

43	8647	((data near2 ID) or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID)) or ((song near2 hash) or (music near2 hash) or (mp3 near2 hash) or (audio near2 hash) or (mpeg near2 hash)) and (380/200-205.ccls. or (380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.) or (713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.) or (705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.))	USPAT	2003/12/12 11:29
44	338	(check\$4 or match\$4 or compar\$4) near3 (hash or signature) same (audio or multimedia or mp3 or music or song or data) and (380/200-205.ccls. or (380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.) or (713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.) or (705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.))	USPAT	2003/12/12 11:29
45	520	software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id and (380/200-205.ccls. or (380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.) or (713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.) or (705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.))	USPAT	2003/12/12 11:30
46	41	header near4 (checksum) and (380/200-205.ccls. or (380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.) or (713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.) or (705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.))	USPAT	2003/12/12 11:30
47	17	(header same(watermark\$4)) and (audio or music or song or multimedia or video or program or mp3 or mpeg) and (380/200-205.ccls. or (380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.) or (713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.) or (705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.))	USPAT	2003/12/12 11:30

48	20074	fingerprint\$4 or watermark\$4 and (380/200-205.ccls. or (380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.) or (713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.) or (705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.))	USPAT; EPO; JPO; DERWENT	2003/12/12 11:30
49	303196	MPEG or audio or multimedia or music or song and (380/200-205.ccls. or (380/54.ccls. or 380/210.ccls. or 380/217.ccls. or 380/229.ccls. or 380/236-239.ccls. or 380/241.ccls.) or (713/160.ccls. or 713/161.ccls. or 713/165.ccls. or 713/176.ccls. or 713/181.ccls. or 713/181.ccls. or 713/189.ccls. or 713/200-202.ccls.) or (705/51.ccls. or 705/57-59.ccls. or 705/67.ccls. or 382/115-119.ccls. or 382/124.ccls. or 704/200.ccls.))	USPAT; EPO; JPO; DERWENT	2003/12/12 11:30
-	46	header same fingerprint\$4	USPAT	2003/12/12 11:17
-	121641	audio or music or MPEG or multimedia	USPAT	2003/12/10 11:22
-	11178	biometric or fingerprint\$4	USPAT	2003/12/10 11:23
-	62087	header	USPAT	2003/12/10 11:23
-	15	(audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header	USPAT	2003/12/10 12:24
-	0	(audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header same digital adj1 signature	USPAT	2003/12/10 11:29
-	0	(audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header same digital and signature	USPAT	2003/12/10 11:29
-	2	recalculat\$4 near5 fingerprint\$4	USPAT	2003/12/10 11:32
-	5	recomp\$5 near5 fingerprint\$4	USPAT	2003/12/10 11:32
-	3276	(match\$4 or compar\$4 or equal\$4) same fingerprint\$4	USPAT	2003/12/12 11:18
-	14	((match\$4 or compar\$4 or equal\$4) same fingerprint\$4) and ((audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header)	USPAT	2003/12/10 14:00
-	12	digital adj1 signature and (((match\$4 or compar\$4 or equal\$4) same fingerprint\$4) and ((audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header))	USPAT	2003/12/12 11:18
-	42	decrypt\$4 near3 fingerprint\$4	USPAT	2003/12/12 11:18
-	12	(digital adj1 signature and (((match\$4 or compar\$4 or equal\$4) same fingerprint\$4) and ((audio or music or MPEG or multimedia) same (biometric or fingerprint\$4) same header))) and (decrypt\$4 near3 fingerprint\$4)	USPAT	2003/12/10 14:45
-	1	("5838790").PN.	USPAT	2003/12/10 12:56
-	121	(biometric or fingerprint\$4)near4 accuracy	USPAT	2003/12/10 14:23
-	201	(watermark\$ or hash\$4)near4 header	USPAT	2003/12/11 07:36
-	133712	MPEG or audio or multimedia or music or song	USPAT	2003/12/12 11:19

-	4	((watermark\$ or hash\$4)near4 header) same (MPEG or audio or multimedia or music or song)	USPAT	2003/12/12 11:18
-	1074	fingerprint near2 (data or file or program or signal or song or multimedia)	USPAT	2003/12/11 08:11
-	1125	fingerprint\$3 near2 (data or file or program or signal or song or multimedia)	USPAT	2003/12/11 07:46
-	7	header same (fingerprint\$3 near2 (data or file or program or signal or song or multimedia))	USPAT	2003/12/11 07:40
-	383	fingerprint\$3 near2 (signal or song or multimedia or MP3 or mpeg)	USPAT	2003/12/11 07:55
-	0	header same (fingerprint\$3 near2 (signal or song or multimedia or MP3 or mpeg))	USPAT	2003/12/11 07:47
-	61	header and (fingerprint\$3 near2 (signal or song or multimedia or MP3 or mpeg))	USPAT	2003/12/11 07:54
-	126	hash\$3 near2 (signal or song or multimedia or MP3 or mpeg)	USPAT	2003/12/11 07:56
-	13	header same (hash\$3 near2 (signal or song or multimedia or MP3 or mpeg))	USPAT	2003/12/11 10:59
-	975	hash\$3 near2 (data)	USPAT	2003/12/11 07:56
-	52	(hash\$3 near2 (data)) same header	USPAT	2003/12/11 07:59
-	417	fingerprint adj1 data	USPAT	2003/12/11 08:01
-	1	(fingerprint adj1 data) same header	USPAT	2003/12/11 08:01
-	5	(fingerprint near2 (data or file or program or signal or song or multimedia)) same header	USPAT	2003/12/11 08:19
-	126	fingerprint\$3 near3 data near5 match\$4	USPAT	2003/12/11 08:20
-	6	(fingerprint\$3 near3 data near5 match\$4) and header	USPAT	2003/12/11 08:22
-	1275	(fingerprint4 or hash) near3(data or song or mp3 or mpeg or music or file)	USPAT	2003/12/11 08:23
-	75	header same ((fingerprint4 or hash) near3(data or song or mp3 or mpeg or music or file))	USPAT	2003/12/11 08:25
-	8644	(data near2 ID)or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID)	USPAT	2003/12/11 08:47
-	122	(signature or hash) same ((data near2 ID)or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID))	USPAT	2003/12/11 08:27
-	6	((signature or hash) same ((data near2 ID)or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID))) same header	USPAT	2003/12/11 08:29
-	751	header same (signature or hash or fingerprint) same (audio or music or data or mp3 or mpeg or multimedia or file)	USPAT	2003/12/11 08:46
-	85	header same (signature or hash or fingerprint) same (audio or music or mp3 or mpeg or multimedia)	USPAT	2003/12/11 08:40
-	179	(match\$4 or compar\$4 or check\$4) near4 (fingerprint adj2 data)	USPAT	2003/12/11 08:42
-	4	((match\$4 or compar\$4 or check\$4) near4 (fingerprint adj2 data)) and header	USPAT	2003/12/11 08:41
-	10	(match\$4 or compar\$4 or check\$4) near4 (fingerprint adj2 data) and digital adj1 signature	USPAT	2003/12/11 08:43
-	2853	file near2 header	USPAT	2003/12/11 08:45
-	9	(song near2 hash) or (music near2 hash) or (mp3 near2 hash) or (audio near2 hash) or (mpeg near2 hash)	USPAT	2003/12/11 08:48

-	8652	((data near2 ID) or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID)) or ((song near2 hash) or (music near2 hash) or (mp3 near2 hash) or (audio near2 hash) or (mpeg near2 hash))	USPAT	2003/12/12 11:29
-	744	header same (((data near2 ID) or (song near2 ID) or (music near2 ID) or (mp3 near2 ID) or (audio near2 ID)) or ((song near2 hash) or (music near2 hash) or (mp3 near2 hash) or (audio near2 hash) or (mpeg near2 hash)))	USPAT	2003/12/11 08:49
-	5015	check\$4 or match\$4 or compar\$4) near3(hash or signature	USPAT	2003/12/11 09:00
-	403197	audio or music or multimedia or song or program	USPAT	2003/12/11 08:50
-	705	(check\$4 or match\$4 or compar\$4) near3(hash or signature) same (audio or music or multimedia or song or program)	USPAT	2003/12/11 08:51
-	17	(check\$4 or match\$4 or compar\$4) near3(hash or signature) same (audio or music or multimedia or song or program) same header	USPAT	2003/12/11 08:58
-	533	software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id	USPAT	2003/12/12 11:29
-	5015	check\$4 or match\$4 or compar\$4) near3(hash or signature	USPAT	2003/12/11 09:14
-	1	(header same (software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id)) and (check\$4 or match\$4 or compar\$4) near3(hash or signature)	USPAT	2003/12/11 09:01
-	1	((header same (software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id)) and (check\$4 or match\$4 or compar\$4) near3(hash or signature)) and (check\$4 or match\$4 or compar\$4) near3(hash or signature)	USPAT	2003/12/11 09:01
-	71	header same (software adj1 ID or program adj1 id or audio adj1 id or mp3 adj1 id or mpeg3 adj1 id or music adj1 id or song adj1 id)	USPAT	2003/12/11 09:12
-	5015	check\$4 or match\$4 or compar\$4) near3(hash or signature	USPAT	2003/12/11 09:14
-	859440	audio or multimedia or mp3 or music or song or data	USPAT	2003/12/11 09:15
-	2083	(check\$4 or match\$4 or compar\$4) near3(hash or signature) same (audio or multimedia or mp3 or music or song or data)	USPAT	2003/12/12 11:29
-	75	((check\$4 or match\$4 or compar\$4) near3(hash or signature) same (audio or multimedia or mp3 or music or song or data)) same header	USPAT	2003/12/12 11:19
-	557	fingerprint adj1 data or hash adj1 data	USPAT	2003/12/11 09:26
-	12	(fingerprint adj1 data or hash adj1 data) same header	USPAT	2003/12/11 09:27
-	756	fingerprint near2 data	USPAT	2003/12/11 09:27
-	2	header same (fingerprint near2 data)	USPAT	2003/12/11 09:30
-	30	hash\$3 near3(audio or song or video or mp3 or mpeg or music or multimed)	USPAT	2003/12/11 09:31
-	1	(hash\$3 near3(audio or song or video or mp3 or mpeg or music or multimed)) same header	USPAT	2003/12/11 09:31

-	8	(hash\$3 near3(audio or song or video or mp3 or mpeg or music or multimedia)) and header	USPAT	2003/12/12 11:22
-	189	header near4 (hash\$4)	USPAT	2003/12/12 11:24
-	647	header near4 (checksum)	USPAT	2003/12/12 11:30
-	794	header near4(hash or checksum or fingerprint\$4)	USPAT	2003/12/11 09:36
-	1293047	song or music or multimedia or video or content or mp3 or data	USPAT	2003/12/11 09:56
-	793	(header near4(hash or checksum or fingerprint\$4)) and (song or music or multimedia or video or content or mp3 or data)	USPAT	2003/12/11 09:37
-	571	(header near4(hash or checksum or fingerprint\$4)) same (song or music or multimedia or video or content or mp3 or data)	USPAT	2003/12/11 09:37
-	2635	digital adj1 signature	USPAT	2003/12/11 09:37
-	23	((header near4(hash or checksum or fingerprint\$4)) same (song or music or multimedia or video or content or mp3 or data)) and (digital adj1 signature)	USPAT	2003/12/11 09:41
-	4	((watermark\$ or hash\$4)near4 header) same (MPEG or audio or multimedia or music or song)	USPAT	2003/12/11 09:43
-	7	fingerprint near4 header	USPAT	2003/12/11 09:54
-	60	MD5 same header	USPAT	2003/12/11 09:55
-	60	(song or music or multimedia or video or content or mp3 or data) and (MD5 same header)	USPAT	2003/12/11 09:55
-	868796	song or music or multimedia or video or content or mp3	USPAT	2003/12/11 09:56
-	56	(song or music or multimedia or video or content or mp3) and (MD5 same header)	USPAT	2003/12/12 11:23
-	1127	file adj1 header	USPAT	2003/12/11 09:57
-	65	header same(watermark\$4)	USPAT	2003/12/11 10:02
-	483934	audio or music or song or multimedia or video or program or mp3 or mpeg	USPAT	2003/12/11 10:02
-	63	(header same(watermark\$4)) and (audio or music or song or multimedia or video or program or mp3 or mpeg)	USPAT	2003/12/12 11:30
-	0	(embed\$4 or insert\$4)near4 fingerprint\$4 near5 header	USPAT	2003/12/11 10:59
-	13	(embed\$4 or insert\$4)near4 fingerprint\$4 same header	USPAT	2003/12/11 11:02
-	20	(embed\$4 or insert\$4)near4 watermark\$4 same header	USPAT	2003/12/11 13:33
-	0	inverse adj2 modifi\$5 same fingerprint\$4	USPAT	2003/12/11 13:34
-	3	inverse adj2 modifi\$5 same watermark\$4	USPAT	2003/12/11 13:35
-	11682	fingerprint\$4 or watermark\$4	USPAT	2003/12/12 11:18
-	7	(inverse adj2 modifi\$5) and (fingerprint\$4 or watermark\$4)	USPAT	2003/12/12 11:19
-	0	inverse adj2 modifi\$5 near5 allow\$4	USPAT	2003/12/11 13:54
-	157	inverse adj2 modifi\$5	USPAT	2003/12/12 06:00
-	157	inverse adj2 modifi\$5	USPAT	2003/12/11 14:57
-	63701	inverse adj2 modifi\$5 adn header	USPAT	2003/12/11 14:57
-	24	inverse adj2 modifi\$5 and header	USPAT	2003/12/12 09:00

-	0	inverse adj2 modification same fingerprint\$4	USPAT	2003/12/11 15:09
-	0	inverse adj2 modifi\$5 same fingerprint\$4	USPAT	2003/12/11 15:09
-	3	inverse adj2 modifi\$5 same watermark\$5	USPAT	2003/12/11 15:16
-	28	inverse adj2 transform\$5 near6 advantage\$3	USPAT	2003/12/11 15:21
-	0	IDCI and watermark\$4	USPAT	2003/12/12 05:58
-	39	IDCI	USPAT	2003/12/12 05:59
-	0	inverse adj2 modifi\$5 near4 allow\$4	USPAT	2003/12/12 06:01
-	157	inverse adj2 modifi\$5	USPAT	2003/12/12 07:46
-	68	watermark near2 allow\$4	USPAT	2003/12/12 07:58
-	1	("5892891").PN.	USPAT	2003/12/12 09:01
-	1	("5982891").PN.	USPAT	2003/12/12 09:01

Status: Path 1 of [Dialog Information Services via Modem]

Status: Initializing TCP/IP using (UseTelnetProto 1 ServiceID dialog.com)
Trying 31060000009999...Open

DIALOG INFORMATION SERVICES

PLEASE LOGON:

***** HHHHHHHH SSSSSSSS?

Status: Signing onto Dialog

ENTER PASSWORD:

***** HHHHHHHH SSSSSSSS? *****

Welcome to DIALOG

Status: Connected

Dialog level 03.05.00D

Last logoff: 10dec03 07:40:32

Logon file405 12dec03 11:44:15

*** ANNOUNCEMENT ***

--File 654 - US published applications from March 15, 2001 to the present are now online. Please see HELP NEWS 654 for details.

--File 581 - The 2003 annual reload of Population Demographics is complete. Please see Help News581 for details.

--File 990 - NewsRoom now contains February 2003 to current records.
File 992 - NewsRoom 2003 archive has been newly created and contains records from January 2003. The oldest months's records roll out of File 990 and into File 992 on the first weekend of each month.
To search all 2003 records BEGIN 990, 992, or B NEWS2003, a new OneSearch category.

--Connect Time joins DialUnits as pricing options on Dialog.
See HELP CONNECT for information.

--SourceOne patents are now delivered to your email inbox as PDF replacing TIFF delivery. See HELP SOURCE1 for more information.

--Important news for public and academic libraries. See HELP LIBRARY for more information.

--Important Notice to Freelance Authors--
See HELP FREELANCE for more information

NEW FILES RELEASED

***DIOGENES: Adverse Drug Events Database (File 181)

***Emergency Room (File 454), Hospital Inpatient Profiles (File 462),
and Hospital Outpatient Profiles (File 463)

***World News Connection (File 985)

***Dialog NewsRoom - 2003 Archive (File 992)

***TRADEMARKSCAN-Czech Republic (File 680)

***TRADEMARKSCAN-Hungary (File 681)

***TRADEMARKSCAN-Poland (File 682)

UPDATING RESUMED

RELOADED

***Population Demographics -(File 581)

***CLAIMS Citation (Files 220-222)

REMOVED

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
>>> of new databases, price changes, etc. <<<

* * *

* * *

SYSTEM:HOME

Cost is in DialUnits

Menu System II: D2 version 1.7.9 term=ASCII

*** DIALOG HOMEBASE(SM) Main Menu ***

Information:

1. Announcements (new files, reloads, etc.)
2. Database, Rates, & Command Descriptions
3. Help in Choosing Databases for Your Topic
4. Customer Services (telephone assistance, training, seminars, etc.)
5. Product Descriptions

Connections:

6. DIALOG(R) Document Delivery
7. Data Star(R)

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/H = Help

/L = Logoff

/NOMENU = Command Mode

Enter an option number to view information or to connect to an online service. Enter a BEGIN command plus a file number to search a database (e.g., B1 for ERIC).

?b 2,6,8,34,434,35,62,65,77,99,144,94,233,238,266,15,16,239,98,275,621,636,547,674,256,278,9,148,696

>>> 77 does not exist

>>> 238 does not exist

>>> 278 does not exist

>>>3 of the specified files are not available

12dec03 11:45:42 User264815 Session D36.1

\$0.00 0.151 DialUnits FileHomeBase

\$0.00 Estimated cost FileHomeBase

\$0.46 TELNET

\$0.46 Estimated cost this search

\$0.46 Estimated total session cost 0.151 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 2:INSPEC 1969-2003/Nov W5

(c) 2003 Institution of Electrical Engineers

*File 2: Alert feature enhanced for multiple files, duplicates removal, customized scheduling. See HELP ALERT.

File 6:NTIS 1964-2003/Dec W1

(c) 2003 NTIS, Intl Cpyrght All Rights Res

File 8:Ei Compendex(R) 1970-2003/Nov W5

(c) 2003 Elsevier Eng. Info. Inc.

File 34:SciSearch(R) Cited Ref Sci 1990-2003/Dec W1

(c) 2003 Inst for Sci Info

File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec

(c) 1998 Inst for Sci Info

File 35:Dissertation Abs Online 1861-2003/Oct

(c) 2003 ProQuest Info&Learning

File 62:SPIN(R) 1975-2003/Oct W4

(c) 2003 American Institute of Physics

File 65:Inside Conferences 1993-2003/Dec W1

(c) 2003 BLDSC all rts. reserv.

. File 99:Wilson Appl. Sci & Tech Abs 1983-2003/Oct
 (c) 2003 The HW Wilson Co.
 File 144:Pascal 1973-2003/Nov W5
 (c) 2003 INIST/CNRS
 File 94:JICST-EPlus 1985-2003/Dec W1
 (c)2003 Japan Science and Tech Corp(JST)
 File 233:Internet & Personal Comp. Abs. 1981-2003/Jul
 (c) 2003, EBSCO Pub.
 File 266:FEDRIP 2003/Oct
 Comp & dist by NTIS, Intl Copyright All Rights Res
 File 15:ABI/Inform(R) 1971-2003/Dec 11
 (c) 2003 ProQuest Info&Learning
***File 15: Alert feature enhanced for multiple files, duplicate**
removal, customized scheduling. See HELP ALERT.
 File 16:Gale Group PROMT(R) 1990-2003/Dec 11
 (c) 2003 The Gale Group
***File 16: Alert feature enhanced for multiple files, duplicate**
removal, customized scheduling. See HELP ALERT.
 File 239:Mathsci 1940-2003/Jan
 (c) 2003 American Mathematical Society
 File 98:General Sci Abs/Full-Text 1984-2003/Oct
 (c) 2003 The HW Wilson Co.
 File 275:Gale Group Computer DB(TM) 1983-2003/Dec 11
 (c) 2003 The Gale Group
 File 621:Gale Group New Prod.Annou.(R) 1985-2003/Dec 12
 (c) 2003 The Gale Group
 File 636:Gale Group Newsletter DB(TM) 1987-2003/Dec 11
 (c) 2003 The Gale Group
 File 547:Experian Business Credit Profiles 2003/Nov W5
 (c) 2003 Experian
 File 674:Computer News Fulltext 1989-2003/Dec W1
 (c) 2003 IDG Communications
 File 256:SoftBase:Reviews,Companies&Prods. 82-2003/Nov
 (c)2003 Info.Sources Inc
 File 9:Business & Industry(R) Jul/1994-2003/Dec 11
 (c) 2003 Resp. DB Svcs.
 File 148:Gale Group Trade & Industry DB 1976-2003/Dec 12
 (c)2003 The Gale Group
***File 148: Alert feature enhanced for multiple files, duplicate**
removal, customized scheduling. See HELP ALERT.
 File 696:DIALOG Telecom. Newsletters 1995-2003/Dec 11
 (c) 2003 The Dialog Corp.

Set Items Description

--- -----

?s (match? or compar? or equal or check? or valid or verif?) (3n) (fingerprint?)

Processing

Processed 10 of 26 files ...

Processing

Processed 20 of 26 files ...

Processing

Completed processing all files

1503677 MATCH?

10380681 COMPAR?

1291072 EQUAL

1694197 CHECK?

396318 VALID

989814 VERIF?

83746 FINGERPRINT?

S1 8185 (MATCH? OR COMPAR? OR EQUAL OR CHECK? OR VALID OR VERIF?)
 (3N) (FINGERPRINT?)

?s fingerprint? or watermark?

83746 FINGERPRINT?

23104 WATERMARK?

S2 106079 FINGERPRINT? OR WATERMARK?

?s MPEG or audio or music or multimedia or song?

Processing

Processed 20 of 26 files ...

Completed processing all files

103872 MPEG

915697 AUDIO

860325 MUSIC

806464 MULTIMEDIA

235863 SONG?

S3 2337680 MPEG OR AUDIO OR MUSIC OR MULTIMEDIA OR SONG?

?s header (s) s2

41895 HEADER

106079 S2

S4 99 HEADER (S) S2

?s (signature or hash? or fingerprint?) (s) header?

284500 SIGNATURE

66636 HASH?

83746 FINGERPRINT?

58976 HEADER?

S5 457 (SIGNATURE OR HASH? OR FINGERPRINT?) (S) HEADER?

?s s5 and s3

457 S5

2337680 S3

S6 62 S5 AND S3

?s (encrypt? or cipher? or encipher?) (s) s1

227420 ENCRYPT?

14526 CIPHER?

1259 ENCIPHER?

8185 S1

S7 189 (ENCRYPT? OR CIPHER? OR ENCIPHER?) (S) S1

?e au=rhoads,geoffrey

Ref	Items	Index-term
E1	1	AU=RHOADS, WILLIAM DENHAM
E2	1	AU=RHOADS, WILLIAM T.
E3	0	*AU=RHOADS,GEOFFREY
E4	1	AU=RHOADSM CHRISTOPHER
E5	1	AU=RHOADSMARTINEZ R
E6	1	AU=RHOADSROBERTS JL
E7	1	AU=RHOADS, CHRISTOPHER
E8	1	AU=RHOBERT
E9	1	AU=RHOBY RK
E10	1	AU=RHOD LARSEN, N.
E11	1	AU=RHOD, E.
E12	3	AU=RHODA

Enter P or PAGE for more

?e au=levy,kenneth

Ref	Items	Index-term
E1	1	AU=LEVY, ZULEIKA ANTUNES DA SILVA
E2	1	AU=LEVY,,LIZ
E3	0	*AU=LEVY,KENNETH
E4	1	AU=LEVYA A
E5	1	AU=LEVYA E
E6	1	AU=LEVYA GARCIA A
E7	1	AU=LEVYA P
E8	1	AU=LEVYA V
E9	1	AU=LEVYA, G.
E10	3	AU=LEVYA, PHIL
E11	1	AU=LEVYA, S. K. V.
E12	49	AU=LEVYADUN S



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US Patent & Trademark Office



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Search Results for: **[watermark and fingerprint]**
Found **53** of **124,998** searched.

Search within Results



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Sort by: **Title** **Publication** **Publication Date** **Score** Binder

Results 1 - 20 of 53 short listing

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[3](#)

[Next Page](#)

- 1** Effective iterative techniques for fingerprinting design IP 99%

Andrew E. Caldwell , Hyun-Jin Choi , Andrew B. Kahng , Stefanus Mantik , Miodrag Potkonjak , Gang Qu , Jennifer L. Wong
Proceedings of the 36th ACM/IEEE conference on Design automation conference June 1999
- 2** Software and systems: Constructing a virtual primary key for fingerprinting relational data 99%

Yingjiu Li , Vipin Swarup , Sushil Jajodia
Proceedings of the 2003 ACM workshop on Digital rights management October 2003

Agrawal and Kiernan's watermarking technique for database relations [1] and Li et al's fingerprinting extension [6] both depend critically on primary key attributes. Hence, those techniques cannot embed marks in database relations without primary key attributes. Further, the techniques are vulnerable to simple attacks that alter or delete the primary key attribute. This paper proposes a new fingerprinting scheme that does not depend on a primary key attribute. The scheme constructs virtual primar ...
- 3** Fingerprinting intellectual property using constraint-addition 99%

Gang Qu , Miodrag Potkonjak
Proceedings of the 37th conference on Design automation June 2000

Recently, intellectual property protection (IPP) techniques attracted a great deal of attention from semiconductor, system integration and software companies. A number of watermarking-based techniques have been proposed for IPP. One of the key limitations of watermarking is that it does not facilitate tracing of illegally resold intellectual property (IP). Fingerprinting resolves this problem by providing each customer with a unique instance of functionally identical IP. We propose ...

4 Publicly detectable techniques for the protection virtual components 97%



Gang Qu

Proceedings of the 38th conference on Design automation June 2001

Highlighted with the newly released intellectual property (IP) protection white paper by VSI Alliance, the protection of virtual components (VCs) has received a large amount of attention recently. Digital signature is one of the most promising solutions among the known protection mechanisms. However, the trade-off between hard-to-attack and easy-to-detect and the lack of efficient detection schemes are the major obstacles for digital signatures to thrive. In this paper, we propose a new wat ...

5 Software watermarking: models and dynamic embeddings 96%



Christian Collberg , Clark Thomborson

Proceedings of the 26th ACM SIGPLAN-SIGACT symposium on Principles of programming languages January 1999

6 Session 7: content watermarking: Multimedia content screening using a 96%



dual watermarking and fingerprinting system

Darko Kirovski , Henrique Malvar , Yacov Yacobi

Proceedings of the tenth ACM international conference on Multimedia December 2002

We present a new dual watermarking and fingerprinting system, where initially all copies of a protected object are identically watermarked using a secret key, but individual detection keys are distinct. By knowing a detection key, an adversary cannot recreate the original content from the watermarked content. However, knowledge of any one detection key is sufficient for modifying the object so that a detector using that key would fail to detect the marks. Detectors using other detection keys wou ...

7 A functional taxonomy for software watermarking 95%



Jasvir Nagra , Clark Thomborson , Christian Collberg

Australian Computer Science Communications , Proceedings of the twenty-fifth Australasian conference on Computer science - Volume 4 January 2002

Volume 24 Issue 1

Despite the recent surge of interest in digital watermarking technology from the research community, we lack a comprehensive and precise terminology for software watermarking. In this paper, we attempt to fill that gap by giving distinctive names for the various protective functions served by software watermarks: Validation Mark, Licensing Mark, Authorship Mark and Fingerprinting Mark. We identify the desirable properties and specific vulnerabilities of each type of watermark, and we illustrate ...

8 VLSI design: Zero overhead watermarking technique for FPGA designs 93%



Adarsh K. Jain , Lin Yuan , Pushkin R. Pari , Gang Qu

Proceedings of the 13th ACM Great Lakes Symposium on VLSI April 2003

FPGAs, because of their re-programmability, are becoming very popular for creating and exchanging VLSI intellectual properties (IPs) in the reuse-based design paradigm. Existing watermarking and fingerprinting techniques successfully embed identification information into FPGA designs to deter IP infringement. However, such methods incur timing and/or resource overhead, unpredictable at times, which causes performance degradation. In this paper, we propose a new FPGA watermarking technique that g ...

9 Comparing the usage of digital rights management systems in the 92%



music, film, and print industry

Marc Fetscherin , Matthias Schmid

Proceedings of the 5th international conference on Electronic commerce

September 2003

The business of content providers is being threatened by technology advances in hardware, software and IP-networks such as the Internet or peer-to-peer file sharing systems. The result is an increasing amount of illegal copies available on-line as well as off-line. With the emergence of Digital Rights Management Systems (DRMS), the media and entertainment industry seems to have found the appropriate tool to simultaneously fight piracy and to monetize their assets. Although these systems are very ...

10 H204M — watermarking for media: classification, quality evaluation, 92%



design improvements

Jana Dittmann , Martin Steinebach , Thomas Kunkelmann , Ludwig Stoffels

Proceedings of the 2000 ACM workshops on Multimedia November 2000

Security has become one of the most significant problems for spreading new information technology. Beside cryptographic solutions digital watermarking methods offer several protection possibilities. H204M — Watermarking for Media is a joined project at GMD-IPSI (German National Research Center for Information Technology) and the German broadcast archive DRA funded by the German government to classify, evaluate and improve digital watermarking techniques. Today a wide variety of techniqu ...

11 A secure multicast protocol with copyright protection 90%



Hao-hua Chu , Lintian Qiao , Klara Nahrstedt , Hua Wang , Ritesh Jain

ACM SIGCOMM Computer Communication Review April 2002

Volume 32 Issue 2

We present a simple, efficient, and secure multicast protocol with copyright protection in an open and insecure network environment. There is a wide variety of multimedia applications that can benefit from using our secure multicast protocol, e.g., the commercial pay-per-view video multicast, or highly secure military intelligence video conference. Our secure multicast protocol is designed to achieve the following goals. (1) It can run in any open network environment. It does not rely on any sec ...

12 Secure data hiding in wavelet compressed fingerprint images 90%



Nalini K. Ratha , Jonathan H. Connell , Ruud M. Bolle

Proceedings of the 2000 ACM workshops on Multimedia November 2000

With the rapid growth of the Internet, electronic commerce revenue now amounts to several billion US dollars. To avoid fraud and misuse, buyers and sellers desire more secure methods of authentication than today's userid and password combinations. Automated biometrics technology in general, and fingerprints in particular, provide an accurate and reliable authentication method. However, fingerprint-based authentication requires accessing fingerprint images scanned remotely at the user's workst ...

13 Watermarking maps: hiding information in structured data 90%



Sanjeev Khanna , Francis Zane

Proceedings of the eleventh annual ACM-SIAM symposium on Discrete algorithms February 2000

14 Efficient dynamic traitor tracing 89%

Omer Berkman , Michal Parnas , Jiří Sgall

Proceedings of the eleventh annual ACM-SIAM symposium on Discrete algorithms February 2000**15 Session 7C: Lower bounds for collusion-secure fingerprinting** 89%

Chris Peikert , Abhi shelat , Adam Smith

Proceedings of the fourteenth annual ACM-SIAM symposium on Discrete algorithms January 2003

Collusion-secure fingerprinting codes are an important primitive used by many digital watermarking schemes [1, 10, 9]. Boneh and Shaw [3] define a model for these types of codes and present an explicit construction. Their code has length $O(c^3 \log(1/\epsilon))$ and attains security against coalitions of size c with ϵ error. Boneh and Shaw also present a lower bound of $\Omega(c^3 \log(1/c\epsilon))$ on the length of any collusion-secure ...

16 Watermarking cyberspace 88%

Hal Berghel

Communications of the ACM November 1997
Volume 40 Issue 11**17 Efficiency of data structures for detecting overlaps in digital documents** 87%

Krisztián Monostori , Arkady Zaslavsky , Heinz Schmidt

Australian Computer Science Communications , Proceedings of the 24th Australasian conference on Computer science January 2001
Volume 23 Issue 1

This paper analyses the efficiency of different data structures for detecting overlap in digital documents. Most existing approaches use some hash function to reduce the space requirements for their indices of chunks. Since a hash function can produce the same value for different chunks, false matches are possible. In this paper we propose an algorithm that can be used for eliminating those false matches. This algorithm uses a suffix tree structure, which is space consuming. We define a modified ...

18 Coding and Encryption: An image watermarking technique using 87%

pyramid transform

Qiang Cheng , Thomas S. Huang

Proceedings of the ninth ACM international conference on Multimedia October 2001

An image watermarking technique based on pyramid transforms is proposed. An arbitrary binary pattern is formed into an effective hypothesized pattern and transmitted as a watermark. Multiresolution pyramid transforms are applied to host images, whose characteristics are exploited to embed the watermark. The detector is designed to be effective to a wide range of original signal sources and noise sources. The scheme is designed to achieve efficient trade-offs between perceptual invisibility, robu ...

19 Multimedia content protection by cryptography and watermarking in 87%

tamper-resistant hardware

Feng Bao

Proceedings of the 2000 ACM workshops on Multimedia November 2000

With the rapid growth of broadband network, distribution of multimedia via Internet is a must way to go. Content protection has become one of the most significant and challenging problems of this field. In this paper, we propose a general scheme that combines public key cryptography and watermarking technology together, to achieve wonderful content protection. The scheme is reliable, flexible and efficient.

20 Digital watermarking makes its mark

85%



Hal Berghel

netWorker September 1998

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21 Shape retrieval and watermarking: Shape intrinsic fingerprints for free- 83% form object matching

K. H. Ko , T. Maekawa , N. M. Patrikalakis , H. Masuda , F.-E. Wolter

Proceedings of the eighth ACM symposium on Solid modeling and applications

June 2003

This paper presents matching and similarity evaluation methods between two NURBS surfaces, and their application to copyright protection of digital data representing solids or NURBS surfaces. Two methods are employed to match objects: the moment and the curvature methods. The moment method uses integral properties, i.e. the volume, the principal moments of inertia and directions, to find the rigid body transformation as well as the scaling factor. The curvature method is based on the Gaussian an ...

22 Robust FPGA intellectual property protection through multiple small 83% watermarks

John Lach , William H. Mangione-Smith , Miodrag Potkonjak

Proceedings of the 36th ACM/IEEE conference on Design automation conference

June 1999

23 Watermarking techniques for intellectual property protection 83%

A. B. Kahng , J. Lach , W. H. Mangione-Smith , S. Mantik , I. L. Markov , M. Potkonjak , P. Tucker , H. Wang , G. Wolfe

Proceedings of the 35th annual conference on Design automation conference May 1998

Digital system designs are the product of valuable effort and know-how. Their embodiments, from software and HDL program down to device-level netlist and mask data, represent carefully guarded intellectual property (IP). Hence, design methodologies based on IP reuse require new mechanisms to protect the rights of IP

producers and owners. This paper establishes principles of watermarking-based IP protection, where a watermark is a mechanism for identificatio ...

24 Asymmetric fingerprinting for larger collusions 83%



Birgit Pfitzmann , Michael Waidner

Proceedings of the 4th ACM conference on Computer and communications security April 1997

25 Watermaking three-dimensional polygonal models 83%



Ryutarou Ohbuchi , Hiroshi Masuda , Masaki Aono

Proceedings of the fifth ACM international conference on Multimedia November 1997

26 Assurance in life/nation critical endeavors: Assurance in life/nation 83%



critical endeavors a panel

Steven J. Greenwald , Marv Schaefer

Proceedings of the 2002 workshop on New security paradigms September 2002

Our thesis is that biometric and other intertwined technologies will be used to supplement the work of people in the security field. When these technologies are used, we fear that a high degree of misinterpretation and error is likely. Because of this, we need to identify the technical measures required for these systems. This thesis, along with a justification, and proof sketch, was given to the panelists. Five areas of the technology life-cycle were investigated: modeling, implementation, inter ...

27 Protecting digital media content 83%



Nasir Memon , Ping Wah Wong

Communications of the ACM July 1998
Volume 41 Issue 7

28 Authentication and signature schemes: Print signatures for document 82%



authentication

Baoshi Zhu , Jiankang Wu , Mohan S. Kankanhalli

Proceedings of the 10th ACM conference on Computer and communication security October 2003

We present a novel solution for authenticating printed paper documents by utilizing the inherent non--repeatable randomness existing in the printing process. For a document printed by a laser-printer, we extract the unique features of the non--repeatable print content for each copy. The shape profiles of this content are used as the feature to represent the uniqueness of that particular printed copy. These features along with some important document content is then captured as the *print signa* ...

29 Session 3A: Optimal probabilistic fingerprint codes 80%



Gábor Tardos

Proceedings of the thirty-fifth ACM symposium on Theory of computing June 2003

We construct binary codes for fingerprinting. Our codes for n users that are ϵ -secure against c pirates have length $O(c^2 \log(n/\epsilon))$. This improves the codes proposed by Boneh and Shaw [3] whose length is approximately the square of this length. Our codes are probabilistic. By proving matching lower bounds we establish that the length of these codes is best within a constant factor for reasonable error

probabilities. This lower bound generalizes the ...

30 Watermarking of SAT using combinatorial isolation lemmas 80%



Rupak Majumdar , Jennifer L. Wong

Proceedings of the 38th conference on Design automation June 2001

Watermarking of hardware and software designs is an effective mechanism for intellectual property protection (IPP). Two important criteria for watermarking schemes are credibility and fairness. In this paper, we present the unique solution-based watermarking technique which provides, in a sense, the ultimate answer to both credibility and fairness requirements. Leveraging on a combinatorial theorem of Valiant and Vazirani, we demonstrate how ultimate credibility and complete fairness can a ...

31 Hardware/software IP protection 80%



Marcello Dalpasso , Alessandro Bogliolo , Luca Benini

Proceedings of the 37th conference on Design automation June 2000

Design methodologies based on reuse of intellectual property (IP) components critically depend on techniques to protect IP ownership. IP protection is particularly challenging for hardware/software systems, where an IP core runs embedded software: both the software and the core are valuable IP that must be protected. We propose a new technique for protecting the IP of both processor cores and application software in hardware/software systems. Our approach is based on public-key c ...

32 Digital village: The discipline of Internet forensics 80%



Hal Berghel

Communications of the ACM August 2003

Volume 46 Issue 8

A well-defined field of study and practice has evolved as a result of network hacker activity.

33 Robust mesh watermarking 80%



Emil Praun , Hugues Hoppe , Adam Finkelstein

Proceedings of the 26th annual conference on Computer graphics and interactive techniques July 1999

34 Behavioral synthesis techniques for intellectual property protection 80%



Inki Hong , Miodrag Potkonjak

Proceedings of the 36th ACM/IEEE conference on Design automation conference June 1999

35 Technical trials and legal tribulations 80%



Scott Craver , Boon-Lock Yeo , Minerva Yeung

Communications of the ACM July 1998

Volume 41 Issue 7

36 Mathematics of computing: Securing Java through software 77%



watermarking

D. Curran , N. J. Hurley , M. Ó Cinnéide

Proceedings of the 2nd international conference on Principles and practice of programming in Java June 2003

An important advantage of Java is its portability due to its use of bytecode. However the use of bytecode allows decompilation of Java programs to gain access to their source code. This makes it easier to pirate Java programs, infringing their copyright. This is a disadvantage of Java in comparison with programming languages that compile to native object code. Software watermarking is a relatively new approach to the problem of copyright protection that involves embedding ownership information in ...

37 Watermarking relational data: framework, algorithms and analysis 77%



Rakesh Agrawal , Peter J. Haas , Jerry Kiernan

The VLDB Journal — The International Journal on Very Large Data Bases August 2003

Volume 12 Issue 2

Abstract. We enunciate the need for watermarking database relations to deter data piracy, identify the characteristics of relational data that pose unique challenges for watermarking, and delineate desirable properties of a watermarking system for relational data. We then present an effective watermarking technique geared for relational data. This technique ensures that some bit positions of some of the attributes of some of the tuples contain specific values. The specific bit locations and value ...

38 Alternate distribution strategies for digital music 77%



G. Prem Premkumar

Communications of the ACM September 2003

Volume 46 Issue 9

Digitization of music has created opportunities to reengineer the supply chain and improve its efficiency.

But how will it play out?

39 Risks to the public: Risks to the public in computers and related systems 77%



Peter G. Neumann

ACM SIGSOFT Software Engineering Notes March 2003

Volume 28 Issue 2

40 Columns: Public policy: new on-line surveys and digital watermarking 77%





Bob Ellis

ACM SIGGRAPH Computer Graphics February 1999

Volume 33 Issue 1

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41 Session 4: innovative solutions: A trusted process to digitally sign a document 77%



Boris Balacheff , Liqun Chen , David Plaquin , Graeme Proudler

Proceedings of the 2001 workshop on New security paradigms September 2001

This paper describes a method of increasing the trust in open computing platforms, such that a person can have confidence in producing a digital signature using open platforms. The process of using a digital signature to sign a digital document is well understood. Most descriptions assume the correctness of the process of signing a document within a computing platform. In an increasing connected world, this assumption is no longer true when open computing platforms are used. This paper proposes t ...

42 Electronic commerce: a half-empty glass? 77%



Sasa Dekleva

Communications of the AIS June 2000

43 Hardware metering 77%



Farinaz Koushanfar , Gang Qu

Proceedings of the 38th conference on Design automation June 2001

44 Localized watermarking: methodology and application to operation scheduling 77%




Darko Kirovski , Miodrag Potkonjak

Proceedings of the 1999 IEEE/ACM international conference on Computer-aided design November 1999

This paper addresses the copyright protection problem of integrated circuits designed with blocks which are originated from multiple design sources. The process consists of

two phases. First, a compact signature is generated from every block independently and made public. Utilizing such signatures, a design can be decomposed into its original building blocks, regardless of multiple hierarchies. Then, a map of all the blocks can be built, thus allowing to reconstruct the original copyright d ...

45 Copyright protection of designs based on multi source IPs 77%

 Edoardo Charbon , Ilhami Torunoglu
Proceedings of the 1999 IEEE/ACM international conference on Computer-aided design November 1999


This paper addresses the copyright protection problem of integrated circuits designed with blocks which are originated from multiple design sources. The process consists of two phases. First, a compact signature is generated from every block independently and made public. Utilizing such signatures, a design can be decomposed into its original building blocks, regardless of multiple hierarchies. Then, a map of all the blocks can be built, thus allowing to reconstruct the original copyright d ...

46 A fuzzy commitment scheme 77%


 Ari Juels , Martin Wattenberg
Proceedings of the 6th ACM conference on Computer and communications security November 1999

We combine well-known techniques from the areas of error-correcting codes and cryptography to achieve a new type of cryptographic primitive that we refer to as a fuzzy commitment scheme. Like a conventional cryptographic commitment scheme, our fuzzy commitment scheme is both concealing and binding: it is infeasible for an attacker to learn the committed value, and also for the committer to decommit a value in more than one way. In a convent ...


47 Introducing a legal strand in the computer science curriculum 77%

 Cristina Cifuentes , Anne Fitzgerald
Proceedings of the third Australasian conference on Computer science education July 1998


48 Intellectual property protection by watermarking combinational logic 77%

 synthesis solutions
Darko Kirovski , Yean-Yow Hwang , Miodrag Potkonjak , Jason Cong
Proceedings of the 1998 IEEE/ACM international conference on Computer-aided design November 1998


49 Analysis of watermarking techniques for graph coloring problem 77%

 Gang Qu , Miodrag Potkonjak
Proceedings of the 1998 IEEE/ACM international conference on Computer-aided design November 1998

50 How watermarking adds value to digital content 77%

 John M. Acken
Communications of the ACM July 1998
Volume 41 Issue 7

51 In business today and tomorrow 77%

 Jian Zhao , Eckhard Koch , Chenghui Luo

Communications of the ACM July 1998
Volume 41 Issue 7

52 Digital watermarking

77%



Minerva M. Yeung

Communications of the ACM July 1998
Volume 41 Issue 7

53 Digital access to antiquities

77%



Henry M. Gladney , Fred Mintzer , Fabio Schiattarella , Julián Bescós , Martin Treu

Communications of the ACM April 1998
Volume 41 Issue 4

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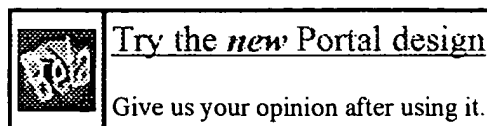

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- 1** **H204M — watermarking for media: classification, quality evaluation, design improvements** 92%
Jana Dittmann , Martin Steinebach , Thomas Kunkelmann , Ludwig Stoffels
Proceedings of the 2000 ACM workshops on Multimedia November 2000

Security has become one of the most significant problems for spreading new information technology. Beside cryptographic solutions digital watermarking methods offer several protection possibilities. H204M — Watermarking for Media is a joined project at GMD-IPSI (German National Research Center for Information Technology) and the German broadcast archive DRA funded by the German government to classify, evaluate and improve digital watermarking techniques. Today a wide variety of techniqu ...

- 2** **A secure multicast protocol with copyright protection** 90%
Hao-hua Chu , Lintian Qiao , Klara Nahrstedt , Hua Wang , Ritesh Jain
ACM SIGCOMM Computer Communication Review April 2002
Volume 32 Issue 2

We present a simple, efficient, and secure multicast protocol with copyright protection in an open and insecure network environment. There is a wide variety of multimedia applications that can benefit from using our secure multicast protocol, e.g., the commercial pay-per-view video multicast, or highly secure military intelligence video conference. Our secure multicast protocol is designed to achieve the following goals.
(1) It can run in any open network environment. It does not rely on any sec ...

- 3** **Software watermarking: models and dynamic embeddings** 87%
Christian Collberg , Clark Thomborson
Proceedings of the 26th ACM SIGPLAN-SIGACT symposium on Principles of

programming languages January 1999

- 4** Coding and Encryption: An image watermarking technique using pyramid transform 87%



Qiang Cheng , Thomas S. Huang

Proceedings of the ninth ACM international conference on Multimedia October 2001

An image watermarking technique based on pyramid transforms is proposed. An arbitrary binary pattern is formed into an effective hypothesized pattern and transmitted as a watermark. Multiresolution pyramid transforms are applied to host images, whose characteristics are exploited to embed the watermark. The detector is designed to be effective to a wide range of original signal sources and noise sources. The scheme is designed to achieve efficient trade-offs between perceptual invisibility, robu ...

- 5** Multimedia content protection by cryptography and watermarking in tamper-resistant hardware 87%



Feng Bao

Proceedings of the 2000 ACM workshops on Multimedia November 2000

With the rapid growth of broadband network, distribution of multimedia via Internet is a must way to go. Content protection has become one of the most significant and challenging problems of this field. In this paper, we propose a general scheme that combines public key cryptography and watermarking technology together, to achieve wonderful content protection. The scheme is reliable, flexible and efficient.

- 6** Fingerprinting intellectual property using constraint-addition 85%



Gang Qu , Miodrag Potkonjak

Proceedings of the 37th conference on Design automation June 2000

Recently, intellectual property protection (IPP) techniques attracted a great deal of attention from semiconductor, system integration and software companies. A number of watermarking-based techniques have been proposed for IPP. One of the key limitations of watermarking is that it does not facilitate tracing of illegally resold intellectual property (IP). Fingerprinting resolves this problem by providing each customer with a unique instance of functionally identical IP. We propose ...

- 7** Session 7: content watermarking: Multimedia content screening using a dual watermarking and fingerprinting system 85%



Darko Kirovski , Henrique Malvar , Yacov Yacobi

Proceedings of the tenth ACM international conference on Multimedia December 2002

We present a new dual watermarking and fingerprinting system, where initially all copies of a protected object are identically watermarked using a secret key, but individual detection keys are distinct. By knowing a detection key, an adversary cannot recreate the original content from the watermarked content. However, knowledge of any one detection key is sufficient for modifying the object so that a detector using that key would fail to detect the marks. Detectors using other detection keys wou ...

- 8** Secure data hiding in wavelet compressed fingerprint images 83%



Nalini K. Ratha , Jonathan H. Connell , Ruud M. Bolle

Proceedings of the 2000 ACM workshops on Multimedia November 2000

With the rapid growth of the Internet, electronic commerce revenue now amounts to several billion US dollars. To avoid fraud and misuse, buyers and sellers desire more secure methods of authentication than today's userid and password combinations. Automated biometrics technology in general, and fingerprints in particular, provide an accurate and reliable authentication method. However, fingerprint-based authentication requires accessing fingerprint images scanned remotely at the user's workst ...

9 Robust FPGA intellectual property protection through multiple small 83%



watermarks

John Lach , William H. Mangione-Smith , Miodrag Potkonjak

Proceedings of the 36th ACM/IEEE conference on Design automation conference

June 1999

10 Watermarking techniques for intellectual property protection 83%



A. B. Kahng , J. Lach , W. H. Mangione-Smith , S. Mantik , I. L. Markov , M. Potkonjak , P. Tucker , H. Wang , G. Wolfe

Proceedings of the 35th annual conference on Design automation conference May 1998

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11 Watermaking three-dimensional polygonal models 83%



Ryutarou Ohbuchi , Hiroshi Masuda , Masaki Aono

Proceedings of the fifth ACM international conference on Multimedia November 1997

12 Protecting digital media content 83%



Nasir Memon , Ping Wah Wong

Communications of the ACM July 1998

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13 Authentication and signature schemes: Print signatures for document 82%



authentication

Baoshi Zhu , Jiankang Wu , Mohan S. Kankanhalli

Proceedings of the 10th ACM conference on Computer and communication security October 2003

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14 Software and systems: Constructing a virtual primary key for 80%

fingerprinting relational data

Yingjiu Li , Vipin Swarup , Sushil Jajodia

Proceedings of the 2003 ACM workshop on Digital rights management October 2003

Agrawal and Kiernan's watermarking technique for database relations [1] and Li et al's fingerprinting extension [6] both depend critically on primary key attributes. Hence, those techniques cannot embed marks in database relations without primary key attributes. Further, the techniques are vulnerable to simple attacks that alter or delete the primary key attribute. This paper proposes a new fingerprinting scheme that does not depend on a primary key attribute. The scheme constructs virtual primar ...

15 Shape retrieval and watermarking: Shape intrinsic fingerprints for free- 80%

form object matching

K. H. Ko , T. Maekawa , N. M. Patrikalakis , H. Masuda , F.-E. Wolter

Proceedings of the eighth ACM symposium on Solid modeling and applications June 2003

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16 A functional taxonomy for software watermarking 80%

Jasvir Nagra , Clark Thomborson , Christian Collberg

Australian Computer Science Communications , Proceedings of the twenty-fifth Australasian conference on Computer science - Volume 4 January 2002
Volume 24 Issue 1

Despite the recent surge of interest in digital watermarking technology from the research community, we lack a comprehensive and precise terminology for software watermarking. In this paper, we attempt to fill that gap by giving distinctive names for the various protective functions served by software watermarks: Validation Mark, Licensing Mark, Authorship Mark and Fingerprinting Mark. We identify the desirable properties and specific vulnerabilities of each type of watermark, and we illustrate ...

17 Watermarking of SAT using combinatorial isolation lemmas 80%

Rupak Majumdar , Jennifer L. Wong

Proceedings of the 38th conference on Design automation June 2001


Watermarking of hardware and software designs is an effective mechanism for intellectual property protection (IPP). Two important criteria for watermarking schemes are credibility and fairness. In this paper, we present the unique solution-based watermarking technique which provides, in a sense, the ultimate answer to both credibility and fairness requirements. Leveraging on a combinatorial theorem of Valiant and Vazirani, we demonstrate how ultimate credibility and complete fairness can a ...


18 Watermarking maps: hiding information in structured data 80%

Sanjeev Khanna , Francis Zane



Proceedings of the eleventh annual ACM-SIAM symposium on Discrete algorithms February 2000

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- 19 Efficient dynamic traitor tracing 80%
•  Omer Berkman , Michal Parnas , Jiří Sgall
Proceedings of the eleventh annual ACM-SIAM symposium on Discrete algorithms February 2000

- 20 Asymmetric fingerprinting for larger collusions 80%
 Birgit Pfizmann , Michael Waidner
Proceedings of the 4th ACM conference on Computer and communications security April 1997

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Proceedings of the 2nd international conference on Principles and practice of programming in Java June 2003 | |

An important advantage of Java is its portability due to its use of bytecode. However the use of bytecode allows decompilation of Java programs to gain access to their source code. This makes it easier to pirate Java programs, infringing their copyright. This is a disadvantage of Java in comparison with programming languages that compile to native object code. Software watermarking is a relatively new approach to the problem of copyright protection that involves embedding ownership information in ...

26 Watermarking relational data: framework, algorithms and analysis 77%



Rakesh Agrawal , Peter J. Haas , Jerry Kiernan

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27 VLSI design: Zero overhead watermarking technique for FPGA designs 77%



Adarsh K. Jain , Lin Yuan , Pushkin R. Pari , Gang Qu

Proceedings of the 13th ACM Great Lakes Symposium on VLSI April 2003

FPGAs, because of their re-programmability, are becoming very popular for creating and exchanging VLSI intellectual properties (IPs) in the reuse-based design paradigm. Existing watermarking and fingerprinting techniques successfully embed identification information into FPGA designs to deter IP infringement. However, such methods incur timing and/or resource overhead, unpredictable at times, which causes performance degradation. In this paper, we propose a new FPGA watermarking technique that g ...

28 Electronic commerce: a half-empty glass? 77%



Sasa Dekleva

Communications of the AIS June 2000

29 Localized watermarking: methodology and application to operation 77%



scheduling

Darko Kirovski , Miodrag Potkonjak

Proceedings of the 1999 IEEE/ACM international conference on Computer-aided design November 1999

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30 A fuzzy commitment scheme 77%




Ari Juels , Martin Wattenberg

Proceedings of the 6th ACM conference on Computer and communications security November 1999


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 Cristina Cifuentes , Anne Fitzgerald
Proceedings of the third Australasian conference on Computer science education
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32 Intellectual property protection by watermarking combinational logic 77%

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Proceedings of the 1998 IEEE/ACM international conference on Computer-aided design November 1998


33 Analysis of watermarking techniques for graph coloring problem 77%

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